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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/706,653      | 11/12/2003  | Shaun Kazuo Wakumoto | 200313912-1         | 7013             |

22879 7590 04/30/2007  
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| EXAMINER |
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ZAIDI, SYED

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2609

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/30/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/706,653

**Applicant(s)**

WAKUMOTO ET AL.

**Examiner**

Syed Zaidi

**Art Unit**

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/12/2003</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Information Disclosure Statement**

The information disclosure statement submitted on 11-12-2003 has been considered by the Examiner and made of record in the application file.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this office action: The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1- 13** are rejected under 35 U.S.C. 102(e) as being anticipated by **Bare** (U.S.Patent # 6,947,384 B2).

**Consider claim 1, Bare** discloses and shows a method of automated path tracing from an original mesh switch through a switching mesh to a specified destination, the method comprising, building a mesh traceroute packet to the specified destination (column 6 lines 43-47, column 9 lines 15-21, column 10 lines 2-6, column 29 lines 7-25 and figure # 1), transmitting the mesh traceroute packet via an exit port associated with the specified destination (column 6 lines 47-51, column 29 lines 10-25) and receiving the mesh traceroute packet as returned (column 6 lines 50-52, column 17 lines 8-33).

**Consider claim 2, Bare** and as applied to claim 1 above, clearly shows and discloses the method, wherein the specified destination comprises a search MAC address (a MAC address for tracing route) and VLAN identifier (column 6 lines 23-58, column 55 lines 3-6, column 56 lines 40-64).

**Consider claim 3, Bare** and as applied to claim 1 above, clearly shows and discloses the method, further comprising: determining whether a trace complete flag (sequence number flag) in the returned packet is set (column 37 lines 6-47); and out putting results from a completed mesh traceroute if the trace complete flag is set and if a trace found flag (broadcast learn flag) is set (column 37 lines 46-47, column 38 lines 1-10).

**Consider claim 4, Bare** and as applied to claim 3 above, and clearly shows and discloses the method that generate an error message, if the trace complete flag is clear if failure is indicated by another flag (switch query error message) (column 21 lines 14-21, column 48 lines 26-33, column 61 lines 18-27).

**Consider claim 5, Bare** and as applied to claim 1 above, clearly shows and discloses the method, further comprising: receiving the mesh traceroute packet at a hop mesh switch (column 48 lines 19-54) appending a hop entry to the mesh traceroute packet (column 29 lines 37-47 and figure # 11 (1112)) and forwarding the

packet via a hop out-port to a next mesh switch (column 48 lines 45-54).

**Consider claim 6, Bare** and as applied to claim 5 above, clearly shows and discloses the method, further comprising: receiving the mesh traceroute packet at a destination mesh switch; appending a final hop entry to the mesh traceroute packet marking a trace complete flag (column 37 lines 6-47, column 7 lines 23-26 and figure # 10) and sending the packet back towards the original mesh (known as a looping) switch (column 9 lines 15-22 and figure #1).

**Consider claim 7, Bare** and as applied to claim 6 above, clearly shows and discloses the method, wherein the packet is sent back towards the original mesh switch by way of a reverse trace path (column 48 lines 19-44 and figure # 18).

**Consider claim 8, Bare** discloses and shows a method of a switching device configured to be a member of a switching mesh, the switching device comprising: a plurality of ports (column 6 lines

46-50, and figure # 1) and a switch control device coupled to the plurality of ports (column 8 lines 16-19 and figure # 29) wherein, the switch control device is configured to perform an automated method of tracing a path through the switching mesh to a specified destination (column 29 lines 7-25, column 9 lines 15-21, column 10 lines 2-6 , column 6 lines 50-52).

**Consider claim 9, Bare** and as applied to claim 8 above, clearly shows and discloses the method, wherein the automated (dynamically) method is accomplished by building a mesh traceroute packet to the specified destination, transmitting the mesh traceroute packet from an exit port associated with the specified destination. (column 79 lines 31-43 and figure #1) and receiving the mesh traceroute packet as returned via the same port (looping) (column 9 lines 15-22, column 57 lines 41-67 and figure # 1).

**Consider claim 10, Bare** and as applied to claim 9 above, clearly shows and discloses the method, wherein the specified destination comprises a search MAC address ( MAC address for tracing route as specified by the applicant) and VLAN identifier

(column 6 lines 23-58, column 56 lines 40-64, column 57 lines 41-65).

**Consider claim 11, Bare.** clearly shows and discloses a method of responding to receipt of a mesh traceroute packet during an automated path tracing, the method comprising: receiving the mesh traceroute packet at a mesh switch (column 3 lines 53-66 and figure # 1, column 9 lines 15-21) and appending a hop entry (one for each hop that a packet traverse on line) (column 29 lines 37-47 and figure #11 (1112), column 22 lines 6-16, column 10 lines 2-6, column 29 lines 7-25) to the mesh traceroute packet (column 48 lines 45-54).

**Consider claim 12, Bare** and as applied to claim 11 above, clearly shows and discloses the method, further comprising: determining that the mesh switch comprises a hop mesh switch filling in at least a hop in-port and a hop out-port in the hop entry and forwarding the packet via the hop out-port to a next mesh switch (switch cost packet) (column 27 lines 41-54).



**Consider claim 13, Bare** and as applied to claim 11 above, clearly shows and discloses the method, further comprising: determining that the mesh switch comprises a destination mesh switch (column 9 lines 15-21, column 10 lines 2-6, column 29 lines 37-47) filling in at least a hop in port in the hop entry (column 48 lines 19-24 and figure #18) marking a trace complete flag (sequence number flag)(column 37 lines 6-47, column 38 lines 1-6 and figure # 12) and returning the packet towards the original mesh switch via the hop in port (known as looping) (column 4 lines 38-44, column 9 lines 15-22).

### **Conclusion**

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Eriksson**. (US Pub #2005/0013297 A1) discloses an control system and communication systems that make it possible to transport traffic in connection-oriented mode using the network infrastructure and hardware of a traditionally connectionless network. **Yu Shaohua** (US Patent # 7,031,341 B2) discloses an interfacing apparatus and method for adopting Ethernet directly to physical channel.

Any response to this Office Action should be **faxed to (571)**

**273-8300 or mailed to:**

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P.O. Box 1450  
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**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Syed Zaidi whose telephone number is (571) 270-1779. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Syed Zaidi*  
S.Z/s.z

April 17, 2007.

  
RAFAEL PEREZ-GUTIERREZ  
SUPERVISORY PATENT EXAMINER

4/23/07